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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/698,549	11/03/2003	Kazuyuki Usuki	Q78202	9938

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EXAMINER

DAVIS, DAVID DONALD

ART UNIT	PAPER NUMBER
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2652

DATE MAILED: 06/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/698,549	Applicant(s) USUKI ET AL.	
	Examiner David D. Davis	Art Unit 2652	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3/24/04</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. Receipt is acknowledged of the Information Disclosure Statement (IDS) received March 24, 2004.

Specification

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 112

4. Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, in lines 3 of claim 2 “a ferromagnetic metal alloy” is indefinite because it is unclear as to whether the “ferromagnetic metal alloy” in claim 1 is referenced or an entirely different alloy.

Claim Rejections - 35 USC § 103

Art Unit: 2652

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ejiri et al (US 4,828,903) in view of Saito (US 4,511,944). As per claim 1, Ejiri et al discloses a removable magnetic recording medium, which is a removable disc medium for use in a magnetic recording system. Ejiri et al discloses in column 2, line 67 through column 3, line 38 that the disc medium includes a flexible polymer support and a recording layer comprising a ferromagnetic metal alloy containing cobalt. As per claim 2, Ejiri et al discloses in column 3, line 66 through column 4, line 3 that the recording layer includes a nonmagnetic oxide and a ferromagnetic metal alloy containing cobalt. As per claim 3, Ejiri et al discloses in column 2, line 67 through column 3, line 38 that the ferromagnetic metal alloy includes one of combinations selected from Co--Pt, Co--Cr, Co--Pt--Cr, Co--Pt--Cr--Ta and Co--Pt--Cr-B.

Art Unit: 2652

Regarding claim 1, Ejiri et al, however, is silent as to the removable disc medium being encased in a cartridge with a diameter of the disc medium is from 20 mm to 50 mm.

Saito shows in figure 2, for example, a disc encased in a cartridge. In column 2, lines 35-43, Ejiri et al discloses a diameter of a disc medium being from 20 mm to 50 mm.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to specify the disc size of Ejiri et al to have a diameter being from 20 mm to 50 mm as taught by Saito. The rationale is as follows: one of ordinary skill in the art at the time the invention was made would have been motivated to provide a diameter being from 20 mm to 50 mm, which is well within the purview of a skilled artisan and absent an unobvious result, so as to provide a reduced sized disk able to be utilized in a myriad of portable products.

7. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ejiri et al (US 4,828,903) in view of Saito (US 4,511,944) as applied to claims 1 and 2 above, and further in view of Shimoda et al (US 6,277,484). Ejiri et al as modified by Saito discloses the claimed invention with respect to claims 1 and 2. However, Ejiri et al as modified by Saito is silent as to the nonmagnetic oxide is SiO₂.

Shimoda et al discloses in column 3, lines 11-20 that a disc includes a nonmagnetic oxide being SiO₂.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to substitute the nonmagnetic oxide of Ejiri et al as modified by Saito with the nonmagnetic oxide of Shimoda et al, which is SiO₂. The rationale is as follows: one of ordinary skill in the art at the time the invention was made would have been motivated to

substitute a non magnetic oxide, such as α - Fe_2O_3 , with the non magnetic oxide of SiO_2 , which is well within the purview of a skilled artisan and absent an unobvious result, because the two oxides are art recognized equivalents readily substitutable thereby providing flexibility in the procurement of disc materials.

8. Claims 5-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ejiri et al (US 4,828,903) in view of Saito (US 4,511,944) as applied to claim 1 above, and further in view of Kamada et al (US 4,619,856). Ejiri et al as modified by Kamada et al discloses the claimed invention with respect to claim 1, supra.

Regarding claim 5-9, Ejiri et al as modified by Saito is silent as to the recording layer having a thickness of from 10 to 60 nm and an undercoat layer having projections.

Kamada et al discloses a recording layer having a thickness of from 10 to 60 nm in column 5, lines 66-68. Kamada et al also discloses in column 4, line 66 through column 25 an undercoat layer.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide Ejiri et al as modified by Saito with a recording layer having a specific thickness and an undercoat layer as taught by Kamada et al. The rationale is as follows: one of ordinary skill in the art at the time the invention was made would have been motivated to provide a recording layer with a specific thickness so that the disc is able to optimal hold the magnetic moment and provide an undercoat layer to strengthen and support the recording layer so that information is able to be effectively recorded and/or reproduce to and from the disc.


Art Unit: 2652

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David D. Davis whose telephone number is 571-272-7572. The examiner can normally be reached on Monday thru Friday between 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa T. Nguyen can be reached on 571-272-7579. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


David D. Davis
Primary Examiner
Art Unit 2652

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